Technical parameters

Model(s):	Outdoor unit: AQUE-160-V3 Indoor unit: AQUI-160-V3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	11.5	kW
Tj = 2℃	Pdh	8.1	kW
Tj = 7℃	Pdh	5.2	kW
Tj = 12℃	Pdh	2.5	kW
Tj = bivalent temperature	Pdh	12.0	kW
Tj = operating limit	Pdh	10.3	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	-5	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.019	kW
Standby mode	P_{sb}	0.019	kW
Thermostat-off mode	P_{to}	0.078	kW
Crankcase heater mode	P_{ck}	0.014	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	124	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	1.95	-
Tj = 2℃	COPd	3.05	-
Tj = 7℃	COPd	4.52	-
Tj = 12℃	COPd	5.96	-
Tj = bivalent temperature	COPd	2.05	-
Tj = operating limit	COPd	1.70	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	Psup	4.6	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L_{WA}	45 / 72	dB
Annual energy consumption	Q_{HE}	9697	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	–	6500	m³/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	-	m^3/h

For heat pump combination heater:							
Declared load profile	-			**Water heating energy efficiency**	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Technical parameters

Model(s):	Outdoor unit: AQUE-160-V3 Indoor unit: AQUI-160-V3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	COLDER
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 ℃	Pdh	8.8	kW
Tj = 2 ℃	Pdh	5.3	kW
Tj = 7 ℃	Pdh	3.3	kW
Tj = 12 ℃	Pdh	2.4	kW
Tj = bivalent temperature	Pdh	10.1	kW
Tj = operating limit	Pdh	7.1	kW
For air-to-water heat pumps: Tj = -15 ℃	Pdh	-	kW
Bivalent temperature	T_{biv}	-10	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.019	kW
Standby mode	P_{sb}	0.019	kW
Thermostat-off mode	P_{to}	0.078	kW
Crankcase heater mode	P_{ck}	0.014	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	98	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 ℃	COPd	2.19	-
Tj = 2 ℃	COPd	3.17	-
Tj = 7 ℃	COPd	4.40	-
Tj = 12 ℃	COPd	6.15	-
Tj = bivalent temperature	COPd	1.85	-
Tj = operating limit	COPd	1.29	-
For air-to-water heat pumps: Tj = -15 ℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-20	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	Psup	14.8	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L_{WA}	-	dB
Annual energy consumption	Q_{HE}	14451	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	–	6500	m^3/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	-	m^3/h

For heat pump combination heater:							
Declared load profile	-			**Water heating energy efficiency**	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Technical parameters

Model(s):	Outdoor unit: AQUE-160-V3 Indoor unit: AQUI-160-V3
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	NO
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	15	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 ℃	Pdh	-	kW
Tj = 2 ℃	Pdh	15.3	kW
Tj = 7 ℃	Pdh	9.9	kW
Tj = 12 ℃	Pdh	4.4	kW
Tj = bivalent temperature	Pdh	15.3	kW
Tj = operating limit	Pdh	15.3	kW
For air-to-water heat pumps: Tj = -15 ℃	Pdh	-	kW
Bivalent temperature	T_{biv}	2	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.019	kW
Standby mode	P_{sb}	0.019	kW
Thermostat-off mode	P_{to}	0.078	kW
Crankcase heater mode	P_{ck}	0.014	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	178	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7 ℃	COPd	-	-
Tj = 2 ℃	COPd	2.42	-
Tj = 7 ℃	COPd	3.80	-
Tj = 12 ℃	COPd	6.08	-
Tj = bivalent temperature	COPd	2.42	-
Tj = operating limit	COPd	2.42	-
For air-to-water heat pumps: Tj = -15 ℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	60	°C
Supplementary heater			
Rated heat output (**)	Psup	0	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/ outdoors	L_{WA}	-	dB
Annual energy consumption	Q_{HE}	3839	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	–	6500	m³/h
For water- or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	–	-	m^3/h

For heat pump combination heater:							
Declared load profile	-			**Water heating energy efficiency**	η_{wh}	-	%
Daily electricity consumption	Q_{elec}	-	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
Annual electricity consumption	AEC	-	kWh	Annual fuel consumption	AFC	-	GJ

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(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.